



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,015	12/21/2001	Joshua J. Malone	TI-29277	2355

23494 7590 04/08/2004

TEXAS INSTRUMENTS INCORPORATED  
P O BOX 655474, M/S 3999  
DALLAS, TX 75265

EXAMINER

GEBREMARIAM, SAMUEL A

ART UNIT	PAPER NUMBER
----------	--------------

2811

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/028,015

Applicant(s)

MALONE ET AL.

Examiner

Samuel A Gebremariam

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:  
page 1, lines 9 and 10 part of the sentences "corner to indication" appears to have a typographical error. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 3-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Guzuk et al. US patent No. 5,153,379.

Regarding claim 1, Guzuk teaches (fig. 1) a substrate for a device package comprising: a lower portion of a package (124); an intermediate metallization layer (130, 132 and 114, (114) is ground pad pattern) on a top surface of the lower portion (124); an upper portion (104) of the package on the top surface of the lower portion, a corner portion of the intermediate metallization (114) layer remaining visible beyond the extent of the upper portion (104) for indicating an orientation of said substrate.

Regarding claim 3, Guzuk teaches the entire claimed structure of claim 1 above including the lower portion comprising a layered ceramic (col. 2, lines 39-49) portion containing electrical interconnections (130 and 132).

Regarding claim 4, Guzik teaches the entire claimed structure of claim 1 above including the visible corner portion comprising a plating (114) on the visible corner portion (col. 3, lines 35, 44).

Regarding claim 5, Guzik teaches the entire claimed structure of claim 1 above including an electrical device (112) electrically connected to portions of the metallization layer (130 and 132).

Regarding claim 6, Guzik teaches the entire claimed structure of claim 1 above including an electrical device (112) electrically connected to portions of the metallization layer (130 and 132), the visible corner portion (114) electrically isolated from the portions of the metallization layer electrically connected to the device (114 is not directly contacting 130 and 32).

Regarding claim 7, Guzik teaches the entire claimed structure of claim 1 above including an electrical device (112) and a lid (102) enclosing the device between the lid and the substrate (128).

Regarding claim 8, Guzik teaches the entire claimed structure of claim 1 above including the upper portion (104) having a void over the visible corner region of the metallization layer (114), the void allowing visibility to the metallization layer (col. 3, lines 38-41).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2811

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Ueda et al. US patent No. 6,037,698.

Regarding claim 1, Ueda teaches (fig. 15) a substrate for a device package comprising: a lower portion of a package (5); an intermediate metallization layer (16) on a top surface of the lower portion (5); an upper portion (6) of the package on the top surface of the lower portion, a corner portion of the intermediate metallization (53) layer remaining visible beyond the extent of the upper portion (6) for indicating an orientation of the substrate.

Regarding claim 2, Ueda teaches the entire claimed structure of claim 1 above including the lower (5) and upper (6) portions comprising a ceramic (col. 7, lines 17-19).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guzuk.

Regarding claim 9, Guzik teaches substantially the entire claimed structure of claim 1 above except explicitly stating that the void is used to mechanically position the substrate.

The limitation, the void used to mechanically position the substrate is not given patentable weight because, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

#### ***Response to Arguments***

8. Applicant's arguments filed 1/05/04 have been fully considered but they are not persuasive. Applicant argues that the reference by Guzik does not anticipate the claimed limitations because Guzik does not teach the limitation that said intermediate metallization layer remaining visible beyond the extent of said upper portion for indicating an orientation of said substrate.

9. In response to applicant's argument that the metallization layer remaining visible beyond the extent of said upper portion for indicating an orientation of said substrate is not given patentable weight because, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the

Art Unit: 2811

prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Guzuk teaches an intermediate metallization layer (130, 132 and 114, (114) is ground pad pattern) on a top surface of the lower portion (124). Layer (114) remains visible after an upper portion (104) of the package sits on the top surface of the lower portion. Therefore region (114) can be used to indicate the substrate orientation since the intermediate metallization (114) layer remaining visible beyond the extent of the upper portion (104).

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel Admassu Gebremariam whose telephone number is 703 305 1913. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (571) 272-1732. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Application/Control Number: 10/028,015

Page 7

Art Unit: 2811

Samuel Admassu Gebremariam

April 4, 2004



**NATHAN J. FLYNN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**